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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,429	10/15/2001	Lars Aksel Thingelstad	0279.3015.001	3257
23399	7590	02/24/2005	EXAMINER	
REISING, ETHINGTON, BARNES, KISSELLE, P.C. P O BOX 4390 TROY, MI 48099-4390			CHORBAJI, MONZER R	
			ART UNIT	PAPER NUMBER
			1744	
DATE MAILED: 02/24/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

11

Office Action Summary	Application No. 09/977,429	Applicant(s) THINGELSTAD, LARS AKSEL	
	Examiner MONZER R CHORBAJI	Art Unit 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03/08/2002</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This general action is in response to the application filing date of 10/15/2001

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the mandrel must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "2" has been used to designate both radiation device in

figure 1 and the apparatus as a whole in figure 2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 15 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 15, numbered lines 2-5, applicant recites "said device being arranged to be active in respect of said partially completed container before said closing arrangement is active in respect of said partially completed container." It is not clear what the applicant is trying to claim in this phrase. Explanation is required. The same applies to claim 26.

Claim Rejections - 35 USC § 103

Art Unit: 1744

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1, 13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koderia (U.S.P.N. 4,396,582) in view of Tuckner et al (U.S.P.N. 5,350,568).

With respect to claims 1, 13 and 20, the Koderia reference teaches a method and a device (figure 8) for sterilizing partially completed containers open at both ends (col.1, lines 61-62) by simultaneously applying hydrogen peroxide and UV radiation (col.3, lines 19-21). However, the Koderia reference fails to teach extending a device into a partially completed container. The Tuckner reference, which is in the art of sterilizing partially completed cartons, teaches the concept of extending a nozzle inside a carton (figures 3 (a)- 3 (c)). Furthermore, the Tuckner reference teaches a drive arrangement to cause the nozzles to

extend into and retract from the cartons (col.5, lines 30-33) thereby producing relative motion between the nozzles and the partially completed containers. As a result, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and device of the Koder reference to include a movable device for extending into and retracting from partially completed containers as taught by the Tuckner reference in order to sterilize the interior of the cartons (col.2, lines 9-11).

8. Claims 2-4, 6-8, 11-12, 14,16, 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koder (U.S.P.N. 4,396,582) in view of Tuckner et al (U.S.P.N. 5,350,568) and further in view of Swain et al (U.S.P.N. 5,419,058).

With respect to claims 2-3, 7-8, 14, 16 and 21, both the Koder reference and the Tuckner reference fail to teach moving the partially completed container; however, the Swain reference, which is in the art of sterilizing substrates, teaches moving the substrate upward and downward past the spray nozzle (col.6, lines 13-15). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and apparatus of the Koder reference by including a carton displacement means as taught by the Swain reference in order to assure that the entire carton is treated (col.6, lines 28-31).

With respect to claims 4, 6, 11 and 17, the Koder reference teaches applying UV light (choosing the shape of the UV lamp is an obvious matter of

choice of design) perpendicular to a common longitudinal axis of the partially completed containers (col.1, lines 61-62 and 20) at a short distance to be folded at a later step.

With respect to claims 12 and 18, the Tuckner reference teaches emitting a substance from an outer end of the device substantially perpendicular to the axis and throughout 360 degrees around the axis (figure 2, 28).

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kodera (U.S.P.N. 4,396,582) in view of Tuckner et al (U.S.P.N. 5,350,568) and further in view of Leshik et al (U.S.P.N. 4,931,302).

With respect to claim 5, both the Tuckner reference and the Kodera reference fail to teach that the partially completed container is in the form of a cup or beaker. However, the Leshik reference, which is in the art of UV sterilization of cup-shaped plastic containers, teaches that such containers have flexible lids (col.4, lines 39-49). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of the Kodera reference to include cup-shaped plastic containers with flexible lids as taught by the Leshik reference since such cups are used in the aseptic filling industry (col.4, lines 39-42).

10. Claims 9-10, 15, 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kodera (U.S.P.N. 4,396,582) in view of Tuckner et al (U.S.P.N. 5,350,568) and further in view of Swain et al (U.S.P.N. 5,419,058) and Rodocker (U.S.P.N. 4,590,740).

With respect to claims 9-10, 15, 19 and 22, the Koder reference, the Tuckner reference and the Swain reference all fail to disclose the use of mandrel and applying mandrel caps to the opposite ends of the partially completed containers. However, the Rodocker reference teaches using a mandrel (12) for emitting a sterilant inside a partially completed container open at both ends (40) and for subsequently closing the other end of the container (station B or C or D) with mandrel caps. Mandrel is conventionally defined as cylindrical axle inserted into a hole in a piece of work to support it during treatment. The mandrel (12) in the Rodocker reference is capable of supporting a blank by being inserted within it. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of the Koder reference to include a mandrel since such a modification is a matter of design choice as evidenced by the Rodocker reference.

11. Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Castberg et al (U.S.P.N. 5,744,094) in view of Swain et al (U.S.P.N. 5,419,058).

With respect to claims 23-24, the Castberg reference, which is in the art of sterilizing partially completed containers, teaches applying radiation to the interior surfaces of cartons (abstract, lines 1-6), but to teach displacing cartons over the radiation source. The Swain reference, which is in the art of sterilizing substrates, teaches moving the substrate

upward and downward past the spray nozzle (col.6, lines 13-15). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and apparatus of the Castberg reference by including a carton displacement means as taught by the Swain reference in order to assure that the entire carton is irradiated (col.6, lines 28-31).

12. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rodocker (U.S.P.N. 4,590,740) in view of Tuckner et al (U.S.P.N. 5,350,568).

With respect to claims 25-26, the Rodocker reference teaches using a mandrel (12) for emitting a sterilant inside a partially completed container open at both ends (40) and for subsequently closing the other end of the container while the latter remains on the mandrel (station B or C or D). Mandrel is conventionally defined as cylindrical axle inserted into a hole in a piece of work to support it during treatment. The mandrel (12) in the Rodocker reference is capable of supporting a blank by being inserted within it. However, the Rodocker reference fails to teach a movable mandrel. The Tuckner reference teaches a movable nozzle (figures 3 (a)- 3 (c)) with a drive arrangement for inserting and retracting (transverse movement path) the nozzle (col.5, lines 30-33). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and apparatus of the Rodocker reference to include a movable mandrel for extending into and retracting from partially completed

containers as taught by the Tuckner reference in order to sterilize the interior of the cartons (col.2, lines 9-11).

13. Claims 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rodocker (U.S.P.N. 4,590,740) in view of Holbert (U.S.P.N. 5,730,934).

With respect to claims 27-28, the Rodocker reference teaches using a mandrel (12) for emitting a sterilant inside a partially completed container open at both ends (40) and a closing arrangement for closing the other end of the container (station B or C or D). Mandrel is conventionally defined as cylindrical axle inserted into a hole in a piece of work to support it during treatment. The mandrel (12) in the Rodocker reference is capable of supporting a blank by being inserted within it. However, the Rodocker reference fails to teach a movable mandrel. The Holbert reference teaches a movable radiation source (figure 6, 20) with an intrinsic drive arrangement for inserting and retracting the UV lamp from within the carton (col.8, lines 59-61). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and apparatus of the Rodocker reference to include a movable mandrel with a radiation source for extending into and retracting from partially completed containers as taught by the Holbert reference in order to sterilize the interior surfaces of the carton with UV radiation (col.8, lines 46-48).

14. Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tuckner et al (U.S.P.N. 5,350,568) in view of Swain et al (U.S.P.N. 5,419,058).

With respect to claims 29-30, the Tuckner reference teaches extending a nozzle for emitting a sterilant inside a carton (figures 3 (a)- 3 (c)). Furthermore, the Tuckner reference teaches a drive arrangement to cause the nozzles to extend into and retract from the cartons (col.5, lines 30-33), but fails to teach moving the container in direction transverses to an axis of the container. With respect to claims 29-30, the Swain reference teaches moving the substrate upward and downward past the spray nozzle (col.6, lines 13-15) in direction transverses to an axis of the container. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and apparatus of the Tuckner reference by adding a carton moving means taught by the Swain reference in order to assure that the entire carton is treated (col.6, lines 28-31).

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Sizer et al reference (U.S.P.N. 5,843,374) teaches simultaneous application of UV light and sterilant and the Palaniappan et al reference (U.S.P.N. 6,056,918) teaches sterilizing cartons on a mandrel.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONZER R CHORBAJI whose telephone number is (571) 272-1271. The examiner can normally be reached on M-F 6:30-3:00.

17. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBERT J WARDEN can be reached on (571) 272-1281. The

Art Unit: 1744

fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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